

CLAIMS

1. A method for operating a fuel cell provided with a membrane electrode assembly which has an electrolyte film, an anode and a cathode, wherein the anode and the cathode sandwich the electrolyte film and carry a catalyst metal, respectively, comprising the steps of:

feeding an oxidizing agent to the cathode and feeding fuel to the anode to generate power;

changing the anode to a cathode, and changing the cathode to an anode after a predetermined period of time has passed; and

feeding an oxidizing agent to the cathode after changed and feeding fuel to the anode after changed, thereby starting power generation again.

2. A method for operating a fuel cell provided with a membrane electrode assembly which has an electrolyte film, an anode and a cathode, wherein the anode and the cathode sandwich the electrolyte film and carry a catalyst metal, respectively, comprising the steps of:

feeding an oxidizing agent to the cathode and feeding fuel to the anode to generate power;

inverting two sides of the membrane electrode assembly after a predetermined period of time has passed to change the anode before inverted to a cathode, and changing the cathode before inverted to an anode; and

feeding an oxidizing agent to the cathode after changed and feeding fuel to the anode after changed, thereby starting power generation again.

3. A method for operating a fuel cell including a cell module provided with a membrane electrode assembly which has an electrolyte film, an anode

and a cathode, wherein the anode and the cathode sandwich the electrolyte film and carry a catalyst metal, respectively, comprising the steps of:

feeding an oxidizing agent to the cathode and feeding fuel to the anode to generate power;

inverting two sides of the cell module after a predetermined period of time has passed to change the anode before inverted to a cathode, and changing the cathode before inverted to an anode; and

feeding an oxidizing agent to the cathode after changed and feeding fuel to the anode after changed, thereby starting power generation again.

4. A method for operating a fuel cell provided with a membrane electrode assembly which has an electrolyte film, an anode and a cathode, wherein the anode and the cathode sandwich the electrolyte film and carry a catalyst metal, respectively, comprising the steps of:

feeding an oxidizing agent to the cathode and feeding fuel to the anode to generate power; and

inverting polarities of terminals of a load to be driven by the fuel cell and interchanging the oxidizing agent and the fuel fed to the anode and the cathode with each other after a predetermined period of time has passed, thereby inverting the direction of an electric current generated by the fuel cell.

5. A method for operating a fuel cell as claimed in one of claims 1 through 4, wherein said changing step is carried out regularly or irregularly.

6. A method for operating a fuel cell as claimed in one of claims 1 through 5, wherein the anode and the cathode carry an identical catalyst

metal or a same type of catalyst metal, and where the amount of the catalyst metal carried by the anode before changed is relatively indicated as 100, the amount of the catalyst metal carried by the cathode before changed is determined to 75 through 125.

7. A method for operating a fuel cell as claimed in one of claims 1 through 6, wherein the anode before changed and the cathode before changed respectively have a gas distributing plate, respectively, and where the pressure loss in said gas distributing plate of the anode before changed is relatively expressed by 100, the pressure loss in the cathode before changed is determined to 75 through 125.